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| 10/780,355 | 02/17/2004 | Andrew M. Jones | 99-TK-555SSC1 | 9938 |
| 30429 7590 01/03/2007 STMICROELECTRONICS, INC. MAIL STATION 2346 1310 ELECTRONICS DRIVE CARROLLTON, TX 75006 | | | EXAMINER TRAN, THIEN D | |
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| SHORTENED STATUTORY PERIOD OF RESPONSE | | MAIL DATE | DELIVERY MODE | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/780,355

Applicant(s)

JONES ET AL.

Examiner

Thien D. Tran

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 1, 8, 13, 17 are objected to because of the following informalities:
The limitation "wherein the arbitration request can be made simultaneously with or a number of cycles later from the transfer request" is not a positive recitation, which does not have any weight because of the "can be" in the limitation.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1, 8, 13, 17, the limitation "wherein the arbitration request can be made simultaneously with or a number of cycles later from the transfer request" is confusing because how can the arbitration request be possible made simultaneously with or a number or cycles?

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being participated by Corbalis et al (U.S Patent No. 5,359,592).

Regarding claim 1, Corbalis discloses a computer system comprising:

a plurality of communication modules (functional modules) interconnected via a cell switching circuit (packet router), each functional module having packet handling circuitry for generating and receiving cells (packets) conveyed by the cell switching circuit (packet router), figure 2; and

a control processor and an arbiter (routing control mechanism) for controlling the flow of cells on the cell switching circuit, said control processor and arbiter (routing control mechanism) being connected to said communication modules and to said cell transmission network, wherein each communication module is operable to generate to the control processor and the arbiter (routing control mechanism) a transfer request to request transfer of a first cell (current cell) and an arbitration request with a destination indicator identifying a destination of any second cell (later cell) after the first cell finished, and wherein the arbitration request *can be* made simultaneously with or a number of cycles later from the transfer request, col.5 lines 55-60.

Regarding claim 2, Corbalis discloses that the arbitration request includes a destination indicator for any cell (later packet), col.5 lines 55-60.

Regarding claim 3, Corbalis discloses that the routing control mechanism accepts the arbitration request and makes a routing decision relating to the

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arbitration request while implementing the transfer of the current packet requested by the transfer request, col.7 lines 55-65.

Regarding claim 4, Corbalis discloses that the arbitration request relates to generate cell after cell in module 51 for example (after the current packet by the same module as generated the current packet), col.6 lines 5-10.

Regarding claim 5, Corbalis discloses at least a set of said functional modules acts as source modules (initiator modules) for generating request packets for implementing transactions, each request packet including said destination indicator, col.6 lines 20-25

Regarding claim 6, Corbalis discloses that at least one of the plurality of modules acts as a destination modules in multicast (target modules) for receiving the request packets and for issuing response packets in response to the request packets, col.6 lines 30-34.

Regarding claim 7, Corbalis discloses that the routing control mechanism is operable to issue an arbitration grant signal indicating that it has committed an arbitration decision in response to an arbitration request, col.7 lines 46-55.

Regarding claim 8, Corbalis discloses a device for connection to a packet transmission network and having packet handling circuitry for generating and receiving packets conveyed by the packet transmission network, figure 2, the device being operable to generate packet flow control requests on the packet transmission network, the flow control requests including: a transfer request to request transfer of a first packet, col.8 lines 1-5; and an arbitration request with a destination indicator identifying a destination of any cell (second packet), col.8

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lines 28-34.

Regarding claim 9, Corbalis discloses that the arbitration request is issued when the next cell (second packet) is ready for transfer, col.7 lines 55-60.

Regarding claim 10, Corbalis discloses that the arbitration request is issued while a transfer of the first packet requested by the transfer request is occurring, col.7 lines 55-60.

Regarding claim 11, Corbalis discloses that the device receives an issue of grant signal (handshake control signal) from the packet transmission network indicating that the packet transmission network is committed to transfer the second packet, col.8 line 7.

Regarding claim 12, Corbalis discloses that the device responds to the an issue of grant signal (handshake control signal) by making a subsequent arbitration request for any next cell (third packet), col.8 line 7.

Regarding claim 13, Corbalis discloses a packet routing mechanism for routing packets between a source device and a destination device that are interconnected via a packet transmission network, figure 2, the routing mechanism comprising:

an arbiter 41 (arbitration mechanism) coupled to the packet transmission network to receive requests from the source device and operable to make routing decisions for each packet for which a request is received, col.7 lines 48-53;

a cell queue circuit (decision queue) for storing at least one decision which has been made by the arbitration mechanism, col.8 lines 55-65; and

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a control processor 40 and arbiter 41 (flow control mechanism) coupled to the arbitration mechanism and the decision queue and operable to issue grant control (handshake control) to the source device in response to the request indicating that a routing decision has been made, col.7 lines 65-67; and

a switch circuit (transfer mechanism) coupled to the packet transmission network for implementing a packet transfer according to a stored routing decision, wherein the arbitration mechanism is configured to make an routing decision for a next cell (later packet) while a current packet is being transferred by the transfer mechanism, col.7 lines 47-64.

Regarding claim 14, Corbalis discloses that the arbitration decisions is made based in part on availability of a destination module (target device), col.8 lines 10-15.

Regarding claim 15, Corbalis discloses that transfer mechanism implements a packet transfer by asserting a grant send to the source device and a send to the target device, co7 lines 65-67.

Regarding claim 16, Corbalis discloses that the handshake control comprises a net grant signal indicating the packet routing network will be ready to accept the later packet on completion of the transfer of the current packet, col.7 lines 47-63.

Regarding claim 17, Corbalis discloses a method for making concurrent of transmission decision (pipelined routing decisions), col.5 line 51, in a computer system comprising:

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providing a plurality of source devices and destination devices interconnected via a packet transmission network, figure 2;
generating a transfer request for a current packet with a source device;
generating an arbitration request for a later packet, col.7 lines 57-60; and
effecting a transfer of the current packet based on an earlier routing decision while making a routing decision in relation to the later packet, col.7 lines 57-60.

Regarding claim 18, Corbalis discloses that the arbitration request relates to a packet to be transferred after the current packet, col.7 line 62.

Regarding claim 19, Corbalis discloses acknowledging the arbitration request by an arbitration grant control signal, col.8 line 6.

Regarding claim 20, Corbalis discloses a target device to indicate that it is in a state to accept a packet by asserting a grant signal, col.7 line 65.

Response to Arguments

7 Applicant's arguments filed 9/18/2006 have been fully considered but they are not persuasive.

Applicant argues that Corbalis does not disclose that the arbitration request can be made simultaneously with or a number of cycles later from the transfer request. In response to the argument, please refer to above page 2 of the office action.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

9. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Thien Tran whose telephone number is (571) 272-3156. The examiner can normally be reached on Monday-Friday from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To, can be reached on (571) 272-7629. Any inquiry of a general nature of relating to the status of this application or proceeding

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should be directed to the Group receptionist whose telephone number is (571) 272-2600.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197.

Patent Examiner

Thien Tran



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SUPERVISORY PATENT EXAMINER
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